

**WHAT IS CLAIMED IS:**

1           1.     Process for the combustion of gaseous and/or liquid fuels in lean premix burners,  
2 wherein the fuel/air mixture is preheated before ignition.

1           2.     Process according to Claim 1, wherein the fuel/air mixture is mixed with an  
2 amount of combustion gas before ignition.

1           3.     Process according to Claim 2, wherein an amount of combustion gas in a mass  
2 fraction of 5% to 60% is admixed to the fuel/air mixture.

1           4.     Process according to Claim 2, wherein an amount of combustion gas directly out  
2 of the combustion chamber is admixed to the fuel/air mixture.

1           5.     Process according to Claim 4, wherein the flowing fuel/air mixture sucks in an  
2 amount of combustion gas directly out of the combustion chamber.

1           6.     Process according to Claim 5, wherein the fuel/air mixture flows in a swirl flow  
2 through a mixing section projecting into a combustion chamber, and sucks in combustion gases  
3 from the combustion chamber up-stream of the mouth of this mixing section.

1           7.     Process according to Claim 6, wherein the combustion gases are sucked in by  
2 means of inlet apertures in the housing jacket of the mixing section.

- 1           8.     Process according to Claim 1, wherein it is applied to the operation of lean
- 2     premixed burners of a gas turbine plant.